

Abstract

Hot press forming of a steel material is made possible by coating the surface of the steel material with a plated layer of zinc or a zinc alloy and forming thereon a barrier layer which prevents the vaporization of zinc even when heated to 700 -
5 1000°C. Corrosion resistance can also be guaranteed without requiring post treatment, and hot press forming of high tensile steel sheet and stainless steel sheet is made possible. The barrier layer is formed by forming an upper plated layer, by surface oxidation, by contact with an oxidizing agent, by contact with Zn and an oxidizing agent, by anodic electrolysis, by cathodic electrolysis, or by coating with a
10 ZnO sol.